REMARKS

Reconsideration of the above-identified application in view of the present amendment is respectfully requested. By the present amendment, claims 4, 6, 9, 10, and 12 have been cancelled. Claims 1-3, 5, 8, 11, 15, 21, and 22 have been amended. Claim 23 has been added. Claims 1-3, 5, 7, 8, 11, and 13-23 are pending in the application.

Claims 1 and 14-20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Cherry (U.S. Patent No. 6,022,044) in view of Bohman et al. (Paper No. 98-S8-O-07, 16th ESV Conference, June 1-4, 1998, Windsor, Canada).

Claim 1 recites an inflatable protection device that, when inflated, contains inflation fluid at a pressure that is sufficient to prevent the head of the occupant from striking the side structure through the thickness of the protection device. This pressure is a *predetermined* function of the thickness of the protection device.

According to the present invention, the predetermined function recited in claim 1 is a mathematically defined functional relationship between the thickness of the protection device and the pressure required to prevent strike through for that particular thickness. A protection device constructed in accordance with the present invention thus provides a distinct advantage in that the need for experimentation to determine the appropriate inflation pressure is eliminated. The present invention thus may provide significant savings in terms of time and cost.

For reasons detailed below, it is respectfully submitted that Cherry and Bohman et al. do not teach or suggest a protection device inflated with inflation fluid to a pressure that is a predetermined function of its thickness. To the contrary, Bohman et al. teaches an inflatable device inflated to a pressure that is a result of trial-and-error experimentation. According to Bohman et al., an air bag is tested at a range of inflation pressures to determine the specific pressure at which desired performance characteristics of the air bag are achieved.

Bohman et al. does not teach or suggest inflating a protection to a pressure that is a predetermined function of its thickness. In Bohman et al., the curtain was inflated to various pressures in order to evaluate its performance. Bohman et al. states, beginning with the last paragraph on page 5, that a range of pressures between 0.5 and 2.0 bar were tested. Bohman et al. goes on to state that, in this range, a pressure of 1.5 bar is required to prevent strike through.

Bohman et al. clearly determines the pressure required to prevent strike through by trial-and-error experimentation. This trial-and-error process is precisely what the present invention intends to avoid. The present invention eliminates the need for experimentation by providing inflation fluid at a pressure that is a predetermined function of the thickness of the protection device. No trial-and-error or other experimentation is required. The inflation fluid pressure is purely a predetermined function of its thickness.

For the reasons stated above, it is respectfully submitted that Cherry and Bohman et al., alone or in combination, do not teach or suggest all of the features recited in Claim 1. Therefore, the rejection of claim 1 under 35 U.S.C. 103(a) should be withdrawn and claim 1 should be indicated as allowable. Claims 3, 14-20 and 23 depend either directly or indirectly from claim 1 and are therefore allowable as depending from an allowable claim and for the specific features recited therein.

Claims 2 and 8 have been amended to independent form and include the limitations of their base claims and any intervening claims. Applicants therefore submit that claims 2 and 8 are allowable, as indicated in the Office Action. Claims 5, 7 and 21, depending from claim 2, and claims 11, 13 and 22, depending from claim 8, are therefore allowable as depending from an allowable claim and for the specific features recited therein.

Claims 1-3, 5, 7, 8, 11, and 13-22 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites that the inflation fluid in the protection device is at a pressure *when the protection device is inflated*. Those having ordinary skill in the art would recognize the phrase "when the protection device is inflated" to mean the time at which the protection device is inflated and deployed to a position for helping to protect an occupant of the vehicle. Thus, the pressure recited in claim 1 is the

pressure at the time the protection device is inflated and deployed to a position for helping to protect an occupant of the vehicle. This is supported in the specification of the present invention as well as in the prior art cited in the Office Action.

The specification states that the inflation fluid in the protection device is at the pressure when the protection device is inflated to the predetermined thickness illustrated at "T" in Fig. 3. (See page 10, line 12, et seq.) The specification also states that the protection device, when inflated to the position of Figs. 2 and 3, is positioned to help protect the vehicle occupant. (See page 8, line 22 through page 10, line 18.) Thus, the specification makes it clear that the inflation fluid in the protection device is at the pressure recited in claim 1 at the time the protection device is in the inflated position of Figs. 2 and 3. The specification also makes it clear that the inflated position of Figs. 2 and 3 is the position to which the protection device is inflated to help protect the vehicle occupant.

The prior art cited in the Office also supports the arguments set forth above. Cherry (U.S. Patent No. 6,022,044) discloses a protection device that, *when inflated*, is located between the vehicle occupant and the side structure to help protect the occupant in the event of a side impact or rollover. (See column 2, lines 22-26).

For these reasons, it is submitted that one having ordinary skill in the art would consider the phrase "when the protection device is inflated" to mean at the time the

protection device is inflated and deployed to a position for helping to protect an occupant of the vehicle.

Also, as amended, claim 1 recites an apparatus having the following structure: an inflatable protection device that, when inflated, contains inflation fluid at a pressure that is a predetermined function of the thickness of the protection device. The method in which the protection device is constructed doesn't matter as long as the apparatus has this structure. For these reasons, it is submitted that claim 1 is recited in proper apparatus form and all of the features recited therein must be given patentable weight.

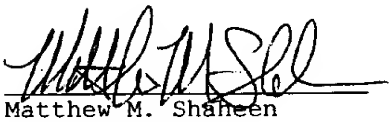
For the reasons set forth above, it is respectfully submitted that the rejections under 35 U.S.C. 112, second paragraph, are improper and should be withdrawn.

Attached is a marked-up version of the amended claims presented in this Amendment. The attached page is captioned "**Version With Markings To Show Changes Made**."

In view of the foregoing, it is respectfully submitted that the above identified application is in condition for allowance, and allowance of the above-identified application is respectfully requested.

Please charge any deficiency or credit any overpayment in the fees for this amendment to our Deposit Account No. 20-0090.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Claims 1-3, 5, 8, 11, 15, 21, and 22 have been amended as follows:

1. (Twice Amended) Apparatus for helping to protect an occupant of a vehicle that has a side structure and a roof, said apparatus comprising:

an inflatable vehicle occupant protection device that is inflatable in a direction away from the vehicle roof into a position between the side structure of the vehicle and a vehicle occupant, said inflatable vehicle occupant protection device comprising overlying panels that are interconnected along at least a portion of a perimeter of said inflatable vehicle occupant protection device to define an inflatable volume of said inflatable vehicle occupant protection device, said inflatable vehicle occupant protection device when inflated having a ~~predetermined~~ thickness measured between overlying points on said overlying panels at a location where the head of an occupant may contact said inflatable vehicle occupant protection device; and

an inflation fluid source that provides inflation fluid to said inflatable volume for inflating said inflatable vehicle occupant protection device, said inflation fluid in said inflatable vehicle occupant protection device being at ~~pressurized to~~ a ~~predetermined~~ pressure when said inflatable vehicle occupant protection device is inflated, wherein said ~~predetermined~~ pressure is ~~being determined as~~ a predetermined

function of said ~~predetermined~~ thickness of said inflatable vehicle occupant protection device, said ~~predetermined~~ pressure being sufficient to prevent the head of the occupant ~~travelling at a predetermined velocity~~ from striking the side structure through said ~~predetermined~~ thickness of said inflatable vehicle occupant protection device.

2. (Amended) ~~Apparatus as defined in claim 1, wherein said predetermined pressure is a function of said predetermined thickness according to the formula:~~

Apparatus for helping to protect an occupant of a vehicle that has a side structure and a roof, said apparatus comprising:

an inflatable vehicle occupant protection device that is inflatable in a direction away from the vehicle roof into a position between the side structure of the vehicle and a vehicle occupant, said inflatable vehicle occupant protection device comprising overlying panels that are interconnected along at least a portion of a perimeter of said inflatable vehicle occupant protection device to define an inflatable volume of said inflatable vehicle occupant protection device, said inflatable vehicle occupant protection device when inflated having a thickness measured between overlying points on said overlying panels at a location where the head of an occupant may contact said inflatable vehicle occupant protection device; and

an inflation fluid source that provides inflation fluid to said inflatable volume for inflating said inflatable

vehicle occupant protection device, said inflation fluid in said inflatable vehicle occupant protection device being at a pressure when said inflatable vehicle occupant protection device is inflated, said pressure having a functional relationship with said thickness of said inflatable vehicle occupant protection device according to:

$P = (4.2 \times 10^7)T^{-2.8}$;

wherein P represents said ~~predetermined~~ pressure expressed in kilopascals and T represents said ~~predetermined~~ thickness expressed in millimeters.

3. (Amended) Apparatus as defined in claim 1 ~~claim 2~~, wherein said ~~predetermined~~ thickness is 120-150 ~~between 100-150~~ millimeters.

5. (Amended) Apparatus as defined in claim 2, wherein said ~~predetermined~~ thickness is ~~between~~ 120-150 millimeters.

8. (Amended) ~~Apparatus as defined in claim 1, wherein said predetermined pressure is a function of said predetermined thickness according to the formula:~~

Apparatus for helping to protect an occupant of a vehicle that has a side structure and a roof, said apparatus comprising:

an inflatable vehicle occupant protection device that is inflatable in a direction away from the vehicle roof into a position between the side structure of the vehicle and a vehicle occupant, said inflatable vehicle occupant

protection device comprising overlying panels that are interconnected along at least a portion of a perimeter of said inflatable vehicle occupant protection device to define an inflatable volume of said inflatable vehicle occupant protection device, said inflatable vehicle occupant protection device when inflated having a thickness measured between overlying points on said overlying panels at a location where the head of an occupant may contact said inflatable vehicle occupant protection device; and

an inflation fluid source that provides inflation fluid to said inflatable volume for inflating said inflatable vehicle occupant protection device, said inflation fluid in said inflatable vehicle occupant protection device being at a pressure when said inflatable vehicle occupant protection device is inflated, said pressure having a functional relationship with said thickness of said inflatable vehicle occupant protection device according to:

$$P = (3.0 \times 10^5)T^{-1.92};$$

wherein P represents said ~~predetermined~~ pressure expressed in kilopascals and T represents said ~~predetermined~~ thickness expressed in millimeters.

11. (Amended) Apparatus as defined in claim 8, wherein said ~~predetermined~~ thickness is ~~between~~ 120-150 millimeters.

15. (Amended) Apparatus as defined in claim 14, wherein said overlying panels are interconnected to define inflatable areas of said inflatable curtain, said ~~predetermined~~ thickness

being measured between said overlying panels within said inflatable areas.

21. (Amended) Apparatus as recited in claim 2, wherein said pressure is sufficient to prevent an occupant's head having a mass of 6.08 kilograms travelling at a velocity of eighteen miles per hour from striking the side structure through said thickness of said inflatable vehicle occupant protection device ~~predetermined velocity of the occupant's head is eighteen miles per hour~~.

22. (Amended) Apparatus as recited in claim 8, wherein said pressure is sufficient to prevent an occupant's head having a mass of 6.08 kilograms travelling at a velocity of twelve miles per hour from striking the side structure through said thickness of said inflatable vehicle occupant protection device ~~predetermined velocity of the occupant's head is twelve miles per hour~~.